SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC

U.S. Department of Transportation

Federal Aviation Administration

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http://www.faa.gov/aircraft/safety/alerts/

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, owners and operators of certain, **The New Piper Aircraft, Inc.,** models listed below, of potential failure of certain control wheel assemblies, part numbers (P/N) 14931, 19337, 21044, 62824, or 68558. These assemblies use Piper P/N 19332 or 62823 control wheels, which are made from plastic. Cracking at the front, bottom, and back of the control wheel may cause the control wheel to fail. This failure may result in loss of control of the aircraft.

Model	Serial Numbers
Group 1	
PA-28-140	28-20001 through 28-7725290 inclusive
PA-28-150/-160/-180	28-1 through 28-4377 inclusive
PA-28-235	28-10001 through 28-11039 inclusive
PA-32-260	32-1 through 32-1110 inclusive
PA-32-300	32-40001 through 32-40565 inclusive
Group 2	
PA-22-150/-160	22-5504 through 22-5977 inclusive
PA-23 and PA-23-160	23-1138 through 23-1333 inclusive
PA-24-180 (Not currently on a US TCDS) and PA-24-250	24-85 through 24-94 inclusive, and 24-96 through 24-102 inclusive

Background

We received several reports of failure of plastic control wheels. Plastic control wheels in Group 1 airplanes are the subject of Airworthiness Directive (AD) 69-22-02 (attached). AD 69-22-02 requires you to repetitively inspect the control wheels at 100 hours time-in-service intervals until replaced with aluminum control wheels. Some reports indicated that cracks may have initiated and propagated within the required inspection interval.

Group 2 airplanes were not included in AD 69-22-02. Since we issued AD 69-22-02, we received reports that some airplanes in Group 2 may also be equipped with plastic control wheels that are susceptible to cracking.

Recommendation

- **Group 1 Airplanes:** Continue to inspect the control wheels as required in AD 69-22-02. However, we recommend that you replace the plastic control wheels with aluminum control wheels as soon as possible (before finding cracks). Use the procedures in AD 69-22-02 and Piper Service Letter No. 527D, dated June 21, 1978, for replacement instructions.

- **Group 2 Aircraft:** We recommend that you inspect your airplane to determine if it is equipped with a plastic control wheels. If a plastic control wheels are installed, we recommend that you initiate an inspection program similar to the one in AD 69-22-02. We also recommend that you replace the plastic control wheels with aluminum control wheels as soon as possible (before finding cracks). Refer to AD 69-22-02 and the appropriate Piper service documents for replacement instructions.

If you find a crack in the control wheels, send a report to us at the address listed below. In the report, include as much information as possible, such as the model number, serial number, part number, and physical description of the crack.

This SAIB doesn't affect Groups 1 and 2 airplanes that aren't equipped with plastic control wheel(s).

Note: Based on current information, we only recommend these actions for Group 2 airplanes. We will continue to investigate and analyze additional information. Based this investigation and analysis, we may take further action, such as the revising AD 69-22-02.

For Further Information Contact

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69-22-02 PIPER: Amdt. 39-865 as amended by Amendment 39-1288 is further amended by Amendment 39-3521. Applies to the following models: PA-28-140, /-150, /-160, /-180, /-235, and PA-32-260/-300. The following are affected serial numbers: PA-28-140, 28-20001 through 28-7725290 inclusive; PA-28-150/-160/-180, 28-1 through 28-4377 inclusive; PA-28-235, 28- 10001 through 28-11039 inclusive; PA-32-260, 32-1 through 32-1110 inclusive; and PA-32-300, 32-40001 through 32-40565 inclusive.

Compliance required within 25 hours time in service from the effective date of this AD, unless already accomplished within the last 75 hours time in service, and thereafter at intervals not to exceed 100 hours time in service from the last inspection.

To prevent possible failure of the control wheel, accomplish the following:

(a) Remove the Piper medallion from the face of each control wheel.

(b) Inspect each control wheel for cracks which may extend radially from the retaining pin. Cracks may be evident on the bottom of the control wheel hub where the pin enters the wheel as line cracks on the face or back of the hub as a crack in the hub cavity in line with the pin. The inspection is to be done using either of the following methods:

(1) Use a small pen light next to the surface and inspect under at least a three-power glass. Inspect in at least a 1/2" path from the top of the pin to the bottom on the front and back of the control wheel hub. Cracks, either needle shaped or extending across the entire surface will show as black lines in the light field. If a line is only a scratch, the bottom will always be visible. The wheel should be cleaned with ordinary detergent and water only. The use of chemical cleaners and/or solvents such as acetone must be avoided.

(2) An equivalent inspection method approved by the Chief, Engineering and Manufacturing Branch, FAA Southern Region.

(c) If cracks are found in the path along the hub as described in (b)(1), replace the control wheel before further time in service. This AD is applicable to new control wheels of the same part number installed in accordance with this paragraph.

(d) The control wheel medallion may be replaced with regular contact cement which has been allowed to dry thoroughly before assembly or with any commercial 2-part epoxy adhesive. Under no circumstances use acetate adhesive or other plastic cements or any form of Locktite as these materials may not be compatible with the plastic material in the wheel.

(e) The repetitive inspection requirements of this AD may be terminated by replacing the plastic control wheel(s) with metal ramshorn type control wheel Piper part number 78729-02V (.750" o.d. shaft) or 79276-00V (1.125" o.d. shaft) as applicable. Replacement of one control wheel (i.e., left or right) does not terminate the requirement for continuing repetitive inspections of the other control wheel, if that other control wheel is the molded plastic type.

(f) Piper Service Letter No. 527D, dated June 21, 1978, or later approved revisions, pertains to this same subject.

(g) Make appropriate logbook entry indicating compliance with the provisions of this AD.

Amendment 39-865 became effective November 4, 1969.

Amendment 39-1288 became effective September 15, 1971.

This amendment 39-3521 becomes effective July 30, 1979.